

## WE CLAIM:

1. A method for installing a heave plate on an offshore floating structure, said method comprising:
  - (a) providing said heave plate and said floating structure at an offshore joining site, said heave plate containing a template capable of receiving at least a portion of the horizontal cross section of said floating structure;
  - (b) vertically positioning said floating structure with said heave plate along a common vertical axis;
  - (c) contacting said floating structure with said template of said heave plate; and
  - (d) connecting said heave plate to said floating structure.
2. The method of claim 1, wherein said floating structure is a spar.
3. The method of claim 2, wherein said heave plate is connected to said floating structure so that said heave plate is horizontally disposed.
4. The method of claim 3, wherein said heave plate is a vessel capable of variable buoyancy.
5. The method of claim 4, wherein said offshore floating structure further comprises a deck, and wherein said vessel with variable buoyancy transports said deck to said offshore joining site.
6. The method of claim 3, wherein said heave plate is non-buoyant.
7. The method of claim 6, wherein said non-buoyant heave plate is transported to said offshore joining site on a vessel.
8. The method of claim 3, wherein said vertical positioning step comprises submerging said heave plate and positioning said heave plate beneath said floating structure.
9. The method of claim 8, wherein said template within said heave plate comprises an opening that extends through a portion of the height of said heave plate.

10. The method of claim 8, wherein said contacting step comprises contacting the lower end of said floating structure with the top of said template.
11. The method of claim 8, wherein said contacting step further comprises the use of guide lines.
12. The method of claim 3, wherein said vertical positioning step comprises submerging said floating structure and positioning said floating structure beneath said heave plate.
13. The method of claim 12, wherein said template within said heave plate comprises an opening that extends through the height of said heave plate
14. The method of claim 12, wherein said contacting step further comprises the use of joining lines.
15. The method of claim 12, wherein said contacting step comprises contacting the upper end of said floating structure with the bottom of said template.
16. The method of claim 15, further comprising re-positioning said heave plate from the upper end of said floating structure to the lower end of said floating structure prior to said step of connecting said heave plate to said floating structure.
17. The method of claim 3, wherein said connecting step comprises latching said heave plate to said floating structure.
18. The method of claim 3, wherein said connecting step comprises grouting the annulus between said heave plate and said floating structure.
19. The method of claim 3, further comprising towing the combined floating structure and heave plate from said offshore joining site to an offshore production location.
20. The method of claim 5, wherein said vertical positioning step comprises submerging said floating structure and positioning said floating structure beneath said heave plate.

21. A method according to Claim 3, further comprising:
  - (e) producing offshore hydrocarbon resources using the floating structure.
22. The method of Claim 21, further comprising:
  - (f) transporting the hydrocarbon resources to shore.
23. A floating structure made according to any of claims 1 through 20.